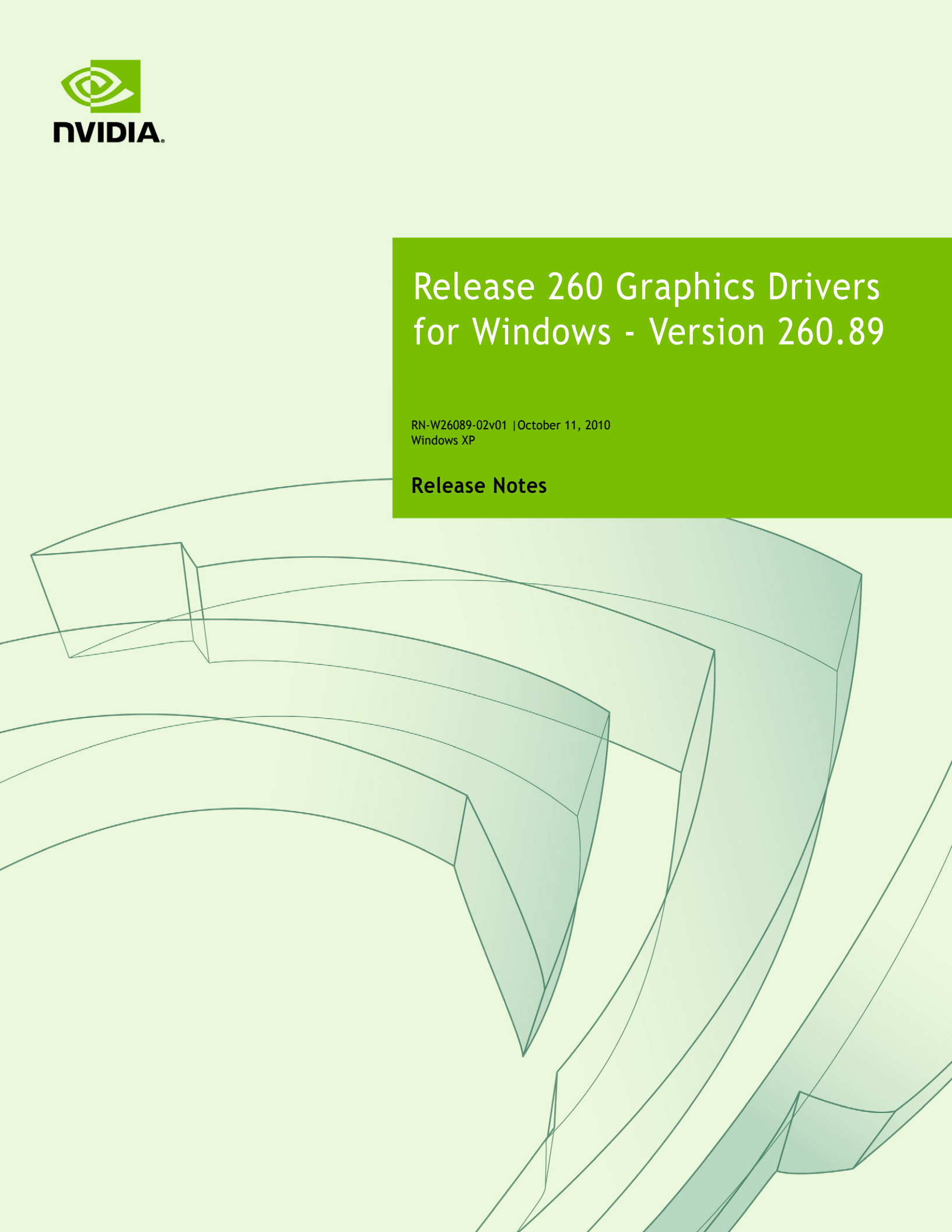

Release 260 Graphics Drivers for Windows - Version 260.89

RN-W26089-02v01 |October 11, 2010
Windows XP

Release Notes

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01 INTRODUCTION TO RELEASE NOTES

This edition of *Release Notes* describes the Release 260 family of graphics drivers for Microsoft® Windows® XP. NVIDIA provides these notes to describe performance improvements and bug fixes in each documented version of the driver.

Structure of the Document

This document is organized in the following sections:

- "Changes in the Release 260 Driver for Windows XP" on page 2 gives a summary of changes, and fixed and open issues in this version.
- "The Release 260 Driver for Windows XP" on page 30 describes the NVIDIA products and languages supported by this driver, the system requirements, and how to install the driver.
- "Mode Support for Windows" on page 43 lists the default resolutions supported by the driver.

Changes in this Edition

This edition of the *Release Notes* for Windows XP includes information about NVIDIA graphics driver version 260.89, and lists changes made to the driver since Release 256 version 258.96. These changes are discussed beginning with the chapter "Changes in the Release 260 Driver for Windows XP" on page 2.

02 CHANGES IN THE RELEASE 260 DRIVER FOR WINDOWS XP

This chapter describes open issues for version 260.89, and resolved issues and driver enhancements for versions of the Release 260 driver up to version 260.89. The chapter contains these sections:

- "Version 260.89 Highlights" on page 3
- "Changes in Version 260.89" on page 6
- "Changes in Version 260.69" on page 7
- "Changes in Version 260.63" on page 8
- "Open Windows XP Issues in Version 260.89" on page 9
- "Not NVIDIA Issues" on page 12
- "Known Product Limitations" on page 21

Version 260.89 Highlights

This section provides highlights of version 260.89 of the NVIDIA Release 260 Driver.

- What's New in Release 260
- What's New in Version 260.89
- Special Instructional Notes

What's New in Release 260

The section summarizes the following driver changes in Release 260:

Installation

The driver installer has been updated with an enhanced user interface, improved installation time for multi-GPU PCs, and new Express and Custom installation options.

- Express - one-click installation
- Custom - customized installation
  - Option to perform a clean installation (completely removes older drivers from your system prior to installing the new driver).
  - Option to choose which driver components (ie. PhysX or 3D Vision) to install.

NVIDIA Control Panel Updates

General Interface

- Removed the Views option to simplify operation.

  You no longer need to select between Standard and Advanced views for many NVIDIA Control Panel controls.

What's New in Version 260.89

- Added support for the GeForce GTS 450 and GT 430 GPUs.
- This driver package installs NVIDIA PhysX System Software v9.10.0514.

  NVIDIA PhysX acceleration is available on all GeForce 8-series, 9-series, 100-series, 200-series, and 400-series GPUs with a minimum of 256MB dedicated graphics memory and a minimum of 32 processor cores.
- This driver package installs the HD audio driver, version 1.1.9.0.
- See "Changes in Version 260.89" on page 6 for a list of changes and resolved issues in this driver version.

Special Instructional Notes

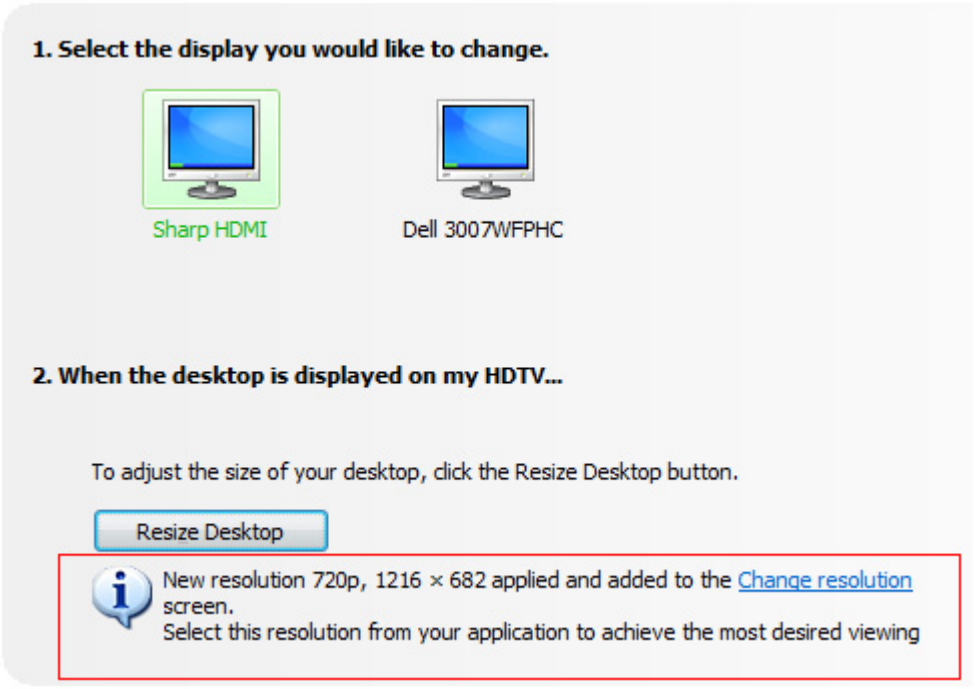
Help for Resizing Your HDTV Desktop

After resizing the HDTV desktop, the new custom resolution created is now added to the list of available resolutions for that display, and also added to the resolution list within the game or application.

In Release 190 and later drivers, the method for resizing the HDTV desktop has changed to provide better image quality when applying underscan. This method results in a new custom resolution being created which needs to be selected from games or applications to apply the resizing.

In the example displayed in the following screen shot, the underscan has created a new resolution (1216x682). Although this resolution looks different, it is still in HD format.

Remember to select this resolution in your game or other application in order to take advantage of it.


1. Select the display you would like to change.
Sharp HDMI
Dell 3007WFPHC
2. When the desktop is displayed on my HDTV...
To adjust the size of your desktop, click the Resize Desktop button.
Resize Desktop
New resolution 720p, 1216 × 682 applied and added to the Change resolution screen.
Select this resolution from your application to achieve the most desired viewing

Note: Some games or applications may not support the new resolution.

Changes in Version 260.89

The following sections list the important changes and the most common issues resolved since the Release 260 driver 260.69. This list is only a subset of the total number of changes made in this driver version.

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows XP 32-bit

Single-GPU Resolved Issues and Changes

- Dead Rising 2–improved SLI scaling for the game. [740504]

Changes in Version 260.69

The following sections list the important changes and the most common issues resolved since the Release 260 driver 260.63. This list is only a subset of the total number of changes made in this driver version.

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows XP 3264-bit

Single-GPU Resolved Issues and Changes

- HQV DVD shows corruption when played using Windows Media Player.[302235]

Fixed Issues–Windows XP 64-bit

Single-GPU Resolved Issues and Changes

- HQV DVD shows corruption when played using Windows Media Player.[302235]

Changes in Version 260.63

The following sections list the important changes and the most common issues resolved since the Release 256 driver 258.96. This list is only a subset of the total number of changes made in this driver version.

The NVIDIA bug number is provided for reference.

Fixed Issues–Windows XP 64-bit

Single-GPU Resolved Issues and Changes

- GeForce GTX 480: Microsoft Flight Simulator–blue-screen crash occurs when running the application.[688401]

Open Windows XP Issues in Version 260.89

As with every released driver, version 260.89 has open issues and enhancement requests associated with it. This section includes lists of issues that are either not fixed or not implemented in this version. Some problems listed may not have been thoroughly investigated and, in fact, may not be NVIDIA issues. Others may have workaround solutions.

For notebook computers, many of these issues are system-specific and may not be seen on your particular notebook.

- "NVIDIA Recommendations" on page 9
- "Windows XP 32-bit Issues" on page 9
- "Windows XP 64-bit Issues" on page 11

NVIDIA Recommendations

- Single display modes such as TV-only, DFP/LCD-only, or CRT-only provide the best performance and quality from Windows Media Center Edition.

  Dual display modes such as Dualview and nView Clone and Span modes are not recommended when using the Windows Media Center.

Windows XP 32-bit Issues

NVIDIA Issues—Single-GPU

All GPUs

GeForce 400 Series

- GeForce 400 Series: The default settings on the NVIDIA Control Panel->Adjust Video Color Settings page are incorrect. [716620]
- GeForce 400 Series: DualView mode is not set automatically after hotplugging a second display.[712892]
- When creating a custom resolution from the NVIDIA Control Panel, an additional resolution erroneously appears in the "PC" list, and the true custom resolution cannot be applied. [709632]
- GeForce 400/200 Series: Borderlands–while playing the game with ambient occlusion enabled and Dynamic Shadows turned on, shadow corruption occurs when changing the game resolution. [646331]

GeForce 9 Series

- GeForce 9800 GT: Lineage 2–the game world is extremely dark. [531486]
- GeForce 9800 GTX: Changes made on the "Adjust Screen Size and Position" page are not saved after changing the HD formats. [524751]
- GeForce 9600 GT: The HDMI TV momentarily goes blank when playing an audio clip (using HD audio) and then switching to full-screen mode. [674934]

GeForce 8 Series GPUs

- GeForce 8800 GTX: Flat panel scaling control is unavailable when the display resolution is less than 1920x1440. [501230]
- GeForce 8800 GTX: Half-Life 2 Episode 1–purple textures appear with 16xQ CSAA enabled at 2560x1600 resolution.[302602]
- GeForce 8800 GTX: The TV desktop cannot be resized using the NVIDIA Control Panel. [674417]
- GeForce 8400: The primary Dualview display cannot be switched. [508817]
- GeForce 8400 SE: The NVIDIA Control Panel shows non-HDCP capable GPUs as HDCP capable. [521675]

GeForce 8M Series GPUs

- GeForce 8800M GTX: NHL 2009–forcing Vertical Sync off using the NVIDIA Control Panel causes the game's main menu to not be displayed. [619351]

GeForce 7 Series GPUs

- GeForce 7 Series: Supreme Commander 2–blocky corruption appears at the edges of the water at all detail levels. [657045]
- GeForce 7 Series: 709 color space is not present during playback of Blu-ray discs or HD DVDs.[263124]
- GeForce 7600 GT: "The Battle Of The Middle Earth II"–corruption occurs when loading the game.[261274]
- GeForce 7300 GS: Lost Planet: Extreme Condition–color corruption appears after launching with the default settings. [359015]

NVIDIA Issues—Multi-GPU

All GPUs

- [SLI]: The NVIDIA logo in the Adjust Image Settings with Preview page does not rotate and shows corruption after switching to the display connected to the SLI slave GPU. [402589]

GeForce 200 Series

- [SLI], GeForce 200 Series, GeForce 9800 GTX, GeForce 8500 GT: World in Conflict–the radar in the game flickers. [532526]

GeForce 9 Series GPUs

- [SLI], GeForce 9600 GT, GeForce 8500/8400/8300: Changes made from the Resize HDTV Settings page are note saved after enabling SLI mode. [529759]

GeForce 8 Series GPUs

- [SLI], GeForce 8600 GT: Battlefield 2–there is texture corruption on the wall in "Gulf Of Oman" map. [350931]
- [SLI], GeForce 8300/8400/8500/8600: Blue-screen crash occurs when using the Set SLI Output control to switch from a display on the SLI master GPU to a display on the SLI slave GPU.

  This occurs with "bridgeless" SLI configurations. When there is no SLI bridge connector, you can use only the displays connected to the SLI master GPU.

GeForce 8M Series GPUs

- [SLI], GeForce 8800M GTX: With SLI mode enabled, The NVIDIA Control Panel does not refresh the DVI monitor entry after hot unplugging and then hot plugging the DVI. [536617]
- [SLI], GeForce 8700M: Dead Space–the application launches to a black screen. [544198]

Windows XP 64-bit Issues

NVIDIA Issues—Single GPU

- GeForce GTX 280: Call of Duty: World at War–there is flickering within the smoke. [531341]

NVIDIA Issues—Multi-GPU

- [SLI]: After installing the driver, the nView Desktop Manager option is not available in the system tray, and no "SLI" pop-up appears. [663291]
- [SLI], GeForce 200 Series, GeForce 9800 GTX, GeForce 8500 GT: World in Conflict–the radar in the game flickers. [532526]

Not NVIDIA Issues

This section lists issues that are not due to the NVIDIA driver.

▶ "Application Issues" on page 12

Application Issues

All GPUs

- Dark Void–if you experience issues playing Dark Void, NVIDIA recommends the following steps:
  a. Install all game patches.

     Retail box owners can get the patch here: http://download.nvidia.com/downloads/nZone/patches/DarkVoid_PhysX_Update_Patch.exe
  b. From the Windows Control Panel->Add/Remove programs, uninstall **NVIDIA Game System Software 2.8.1**.
  c. From the Windows Control Panel->Add/Remove programs, right-click **NVIDIA PhysX** and then click **Repair**.

  If you still experience problems after performing these steps, then either enable V-Sync or skip the cut-scenes by pressing [**Enter**] twice at the cut-scene.
- Dual Core CPU: Counter Strike 1.6 hangs if you play Cheating Death 4.33.4 at same time.

  This application does not properly recognize dual-core CPUs.
- Counter-Strike Source frame rate is jumpy.

  Jittery/lagging movement has been seen when starting a game after running the Video Stress Test.

  Smooth movement is restored after exiting and then restarting the application. The issue does not appear when creating a new game, disconnecting, and then creating another new game.
- HQV DVD playback is bobbing when running in overlay mode.[272289]

  This is not an NVIDIA bug, but rather an issue with the Intervideo decoder in WinDVD 8.
- During DVD and HD DVD/Blu-ray playback, a white screen may appear over video when toggling from windowed to full-screen mode. [263449]

  This issue was reported in driver v96.94 as an NVIDIA driver issue, but now appears to be an application issue with PowerDVD. NVIDIA is working with the application developer to provide a fix.
- Sims 2–"Smooth Edges (AA)" option is not available with Release 100 drivers.[272477]

  This occurs because of an incorrect driver version check in the application.

  NVIDIA has worked around this issue in the operating system by changing the way the driver version is reported to this application.

- Warhammer 40k Dawn of War (all versions) does not run with Release 100 drivers.[273154]

  This occurs because of an incorrect driver version check in the application.

  NVIDIA has worked around this issue in the operating system by changing the way the driver version is reported to this application.

- S.T.A.L.K.E.R. Shadow of Chernobyl: This application is not compatible with the *Override any application setting* or *Enhance the application setting* antialiasing modes from the NVIDIA Control Panel Manage 3D Settings page.

  Please use the in-game antialiasing options.

- Splinter Cell Double Agent crashes when loading a single player game.[270517]

  This is an application issue. You can work around this issue by creating a shortcut to launch the game as follows:

  a. Navigate to the game install directory, then change to the sub-folder \SCDA-Offline\system.
  b. Create a shortcut to splintercell4.exe.
  c. Add "-ll" to the command line of the shortcut.
  d. Use this shortcut to launch the single player version of the game.

- HQV DVD playback is bobbing when running in overlay mode.[272289]

  This is not an NVIDIA bug, but rather an issue with the Intervideo decoder in WinDVD 8.

- Age of Empires 3: Setting application to 1600x1200 with shader quality set to 'very high' causes menus and game to become corrupted.

  This issue can be fixed by installing the v1.07 game patch.

- Company of Heroes: Dark transparent band appears when running the in-game performance test.

  This is an application issue and can be reproduced on NVIDIA GeForce 7900 and ATI Radeon X1950 GPUs.

- Elder Scrolls 4 Oblivion: Running at 2560x1600 with NVIDIA Enhanced Application mode 16xQ, extremely rare 1-2 second pauses occur during some fighting. [262685]

  This appears to be an application issue in how large textures are created during the in-game fighting.

- Far Cry: Water reflection on Archive level is not correct. [253431]

  This appears to be an application issue. NVIDIA is working with the application developer to try to patch their application

- Half-Life 2 Lost Coast: Color corruption occurs in the video stress test after changing the display mode.

  This is a known application issue.

- Half-Life 2 Episode One: Gravity Gun has z-fighting problems on certain portions of the gun. [263505]

- Quake4: Random pauses occur during gameplay. [260029]

This appears to be an application issue that affects testing on Quake4 with dual-core optimizations turned on. Turning off the SMP value in Quake4 eliminates this problem.

- During DVD and HD DVD/Blu-ray playback, a white screen may appear over video when toggling from windowed to full-screen mode.[263449]

  This issue was reported in driver v96.94 as an NVIDIA driver issue, but now appears to be an application issue with PowerDVD. NVIDIA is working with the application developer to provide a fix.

- Age of Empires 3: Vertical sliver appears near the right side of the introduction videos. [221738]

- Battlefield 1942 hangs after playing for a few minutes.[265230]

  This is an application issue with dual-core CPUs.

- Counter-Strike–the application crashes to the desktop if the resolution or bit-depth is changed from the in-game video options menu. [416582]

  This is an application issue, and does not occur if you change the resolution or bit-depth from the game's main menu and not while in the game.

GeForce 9 Series GPUs

- GeForce 9500 GT: BioShock–the desktop brightness levels are affected after exiting the game. [443651]

GeForce 8 Series GPUs

- GeForce 8800 GTX: Counter Strike - the game fails to run in windowed mode with resolutions higher than 1280x1024. [403638]

  This is not an NVIDIA bug, but rather an issue with the application.

- GeForce 8800 GT: EverQuest 2–the introduction video does not display when antialiasing is enabled and the resolution is higher than 1600x1200. [355649]

- GeForce 8800 GTX/GeForce 7900 GTX: Neverwinter Nights 2–the minimap loses its background when the resolution is changed.[273788]

- GeForce 8800 GTX: Tabula Rasa–in-game antialiasing does not work. [353867]

- GeForce 8600: Flight Simulator X–corruption appears after restoring from minimize at the default settings. [354345]

- Half-Life 2 Lost Coast: GeForce 8800 GTX fog looks different than GeForce 7900 GTX fog, and dynamic shadows look solid black. [262215]

  The GeForce 8800 GTX image quality matches the Microsoft Reference Rasterizer. This issue may affect other Half-Life 2 based engines such as Counter-Strike Source and Half-Life Episode 1. NVIDIA is working with the application developer to try to patch their application.

- GeForce 8500/8400/8300: Video corruption occurs when playing the Blu-ray disc title "Tom Cruise the Last Samurai" in IVI. [321632]

- *This is not an NVIDIA bug, but rather an issue with the application.*

- GeForce 8800 GTX: Star Wars: Battlefront 2–there is corruption during the training mission when played at high resolutions. [310721]

  This is not an NVIDIA bug, but rather an issue with the application.

GeForce 7 Series GPUs

- GeForce 7950 GT, GeForce 7900 GT/GS, GeForce 7600 GT: Dragging the Cyberlink application between the primary and secondary Dualview displays results in Cyberlink error message.[251639]
- GeForce 7950 GX2-single card: Half-Life 2–screen corruption occurs after exiting from the game. [358059]
- GeForce 7900 256MB: WinDVD video is corrupt when playing a DivX file.248105

  This is not an NVIDIA bug, but rather an issue with the application.
- GeForce 7 and 6 Series: Prey has non-functioning application antialiasing when the desktop color depth is at 16 bpp.237419

  This is an application issue and not an NVIDIA bug. Enabling 32-bpp desktop color depth fixes this problem.
- GeForce 7 Series, GeForce 6 Series GPUs: Textures are not rendered in Age of Empires 3 at 1600x1200 and higher resolutions.196786

  This is an issue with the application.
- GeForce 7950 GX2, Quad NVIDIA SLI: World of Warcraft–Changing antialiasing modes in the NVIDIA control panel does not improve image quality. 248569

  This is not a bug, but an issue with the application's "Glow" effect. When the Glow effect is enabled, the NVIDIA Control Panel antialiasing settings do not work. Please use in-game antialiasing.
- GeForce 7950 GX2, NVIDIA Control Panel: The Overclocking Configuration - Test button does not appear to have any effect.222639

  This is not a bug. The test is being performed, but there is no visual indicator.
- GeForce 7950 GX2: The Age of Empires introduction video has a vertical sliver on the right side. 221738

  This is not an NVIDIA bug, but rather an issue with the application.
- GeForce 7800 GTX 512 MB: Windows Media Player 10 crashes after playing a DVD for a few minutes.260582

  This is not an NVIDIA bug, but rather an issue with the application.
- GeForce 7800 GTX/GT: The Chronicles of Riddick does not render correctly at 2560x1600 on the Apple 30" Cinema display.196555

  This is an issue with the application.
- GeForce 7800 GTX, Windows XP Media Center Edition 2005 Update2: When running in window mode, there is tearing in the video on the top of the screen when playing MPEG-2 high definition clips on HDTV output.178515

This is an application issue with Media Center and does not occur if you run Media Center in full-screen mode.

- GeForce 7800 GTX/GT: Transparency antialiasing does not work with Grand Theft Auto San Andreas. 188619

  The driver does not apply Transparency antialiasing to triangles that are alpha-blended. Applications with alpha blending do not benefit from Transparency antialiasing.

- GeForce 7800 GT/GTX: Graphics are corrupted at the title screen in Age of Empires 3.191826

  This is not an NVIDIA bug, but an issue with the application.

- GeForce 7800 GT/GTX: F.E.A.R. Demo has blocky explosion effects.191728

  This is not an NVIDIA bug, but an issue with the application.

- GeForce 7800 GTX: Age of Empires 3 demo fails to run when connected to a DVI flat panel. 191128

  This is not an NVIDIA bug, but an issue with the application. Demo versions of the application attempt to set a mode that is not supported on the flat panel. To work around the issue, locate the file newprofile.xml and change the resolution setting to 1024x768.

  This is fixed in final versions of the game.

- GeForce 7800 GTX/GT, GeForce 6800: Textures are not rendered in Age of Empires 3 at 1600x1200 and higher resolutions.196786

  This is not an NVIDIA issue, but rather a bug in the application.

- GeForce 7800/GeForce 6800 GT: Shadow corruption/soft shadows appear after changing video settings in F.E.A.R.191454, 191163

  This is an issue with the application and is documented as such in the demo's release notes.Disabling antialiasing fixes the soft shadow corruption.

- GeForce 7800 GTX / GeForce 6 Series: The Chronicles of Riddick: Escape from Butcher Bay does not run under OpenGL.

  This issue is resolved by downloading and installing the game's 1.1 patch available at http://www.vugames.com/file_list.do?gamePlatformId=1839. This problem occurs as a result of the application checking the NVIDIA OpenGL driver for a version 1.5 instead of 2.0.

- GeForce 7800 GTX, GeForce 6800/6800 Ultra, GeForce 6600 GT: Explosion effects in the game Pariah result in full-screen corruption.166775

  This is an issue with the application. To work around the issue, set the variable ***HasNvidiaTexM32Tex*** *in the file* ***pariah.ini*** *to (1). ((0) is the default.)*

- GeForce 7800 GTX / GeForce 6800 Ultra: Age of Empires 3 demo v1.0 has corruption on the title screen when running at high resolutions (1600x1200) with antialiasing set to Medium or High, Shader Quality set to Very High, and Shadow Quality set to Very High. 191826

  This is an issue with the application.

- GeForce 7300 GT: Command & Conquer 3 Tiberium Wars–some object are not rendered when using the high graphics setting. [316633]

This is an application issue that results in an out-of-memory condition.

GeForce 6 Series GPUs

- GeForce 6600 128MB, Windows XP Media Center Edition 2005:The MCE screen does not appear when switched to full-screen mode.197718

  This is an issue with the application.

- GeForce 7 Series, GeForce 6 Series GPUs: Textures are not rendered in Age of Empires 3 at 1600x1200 and higher resolutions.196786

  This is an issue with the application.

- GeForce 7800 GT/GTX, GeForce 6800/6800 Ultra/GT: When selecting Detect Optimal Frequencies in the control panel, the desktop refresh rate switches to 60Hz.191589
- GeForce 7800 GTX/GT, GeForce 6800: Shadows fail to render in Splinter Cell 1.195248
- GeForce 7800 GTX/GT, GeForce 6800/6600: Ground and water textures are corrupted when zooming out in Civilization 4.196193
- GeForce 6800 PCI-E: The top of the video tears when watching a transport stream clip in VMR mode with Windows Media Player.195521
- GeForce 6800: Corruption occurs on certain vehicles in Joint Operations: Typhoon Rising.195039
- GeForce 6800: Command and Conquer Generals: Zero Hour displays green tint.197726
- GeForce 6800: Flickering corruption appears around the mouse cursor in Dungeon Siege 2.188283
- GeForce 6800, Windows XP Media Center Edition: Blue-screen crash occurs when dragging Windows Media Player 10 window from the primary to the secondary display.191902
- GeForce 6800 PCI-E: When played in Overlay mode, there is an initial hesitation during the Galaxy Quest menu ship flyby.195504
- GeForce 7800 GTX / GeForce 6800 Ultra: Age of Empires 3 demo v1.0 has corruption on the title screen when running at high resolutions (1600x1200) with antialiasing set to Medium or High, Shader Quality set to Very High, and Shadow Quality set to Very High. 191826

  This is an issue with the application.

- GeForce 6800 / 6200: Battlefield 1942 has shimmering textures.192010

  Battlefield 1942 uses negative LOD intensively in the game, but this should not be used in conjunction with anisotropic filtering.

  To reduce shimmering, set the advanced option "negative LOD bias" to CLAMP, and then the image settings slider to High Quality.

- GeForce 7800/GeForce 6800 GT: Screen corruption may occur with F.E.A.R. when antialiasing and soft shadows are enabled. 191454, 191163

This is an issue with the application and is documented as such in the demo's release notes.Disabling antialiasing fixes the soft shadow corruption.

- GeForce 7800 GTX, GeForce 6800/6800 Ultra, GeForce 6600 GT: Explosion effects in the game Pariah result in full-screen corruption.166775

  This is an issue with the application. To work around the issue, set the variable ***HasNvidiaTexM32Tex*** *in the file* ***pariah.ini*** *to (1). ((0) is the default.)*

- GeForce 6800: Shadows are not rendering correctly in Ground Control 2. 136079

  This is not an NVIDIA bug, but an issue with the application.

- Geforce 6800: Half-Life 2 fog is different when using ATI hardware.144508

  This is not an NVIDIA bug, but rather an issue with the application.

- GeForce 6800: Aspect ratio is incorrect when movie transitions from 4:3 to 16:9 playback using PowerDVD5 Trail (download from the Cyberlink Web site). 134455

  This is an application issue, and does not occur with other DVD players.

- GeForce 6800 Ultra, Windows XP: Movies are choppy in Prince of Persia Warrior Within. However, gameplay is not affected.168245

  This is not an NVIDIA bug, but rather an issue with the application.

- GeForce 6800 Ultra PCI-E: Shadows are not rendering correctly in Ground Control 2.136079

- GeForce 6600/6800 (128MB): 3D Mark 2003 demo mode results in an out of memory error at 1600x1200x32 with 4x antialiasing enabled.125700

  This is not a bug. The problem occurs because there is not enough memory to run 3D Mark03 in this mode with a 128MB board.

- GeForce 6600: The 3D Pipes screen saver crashes when previewed with the desktop rotated 90 degrees and then switched back to 0 degrees (no rotation).253578

  This is not an NVIDIA bug, but rather an issue with the application.

- GeForce 6600 GT: Antialiasing doesn't work with Serious Sam II Demo. 189613

  This is not a bug. HDR in Serious Sam II is not supported by the NVIDIA control panel antialiasing.

- GeForce 6600 (128 MB): The game Hitman—Contracts refuses to start with graphics options set to the maximum (1600x1200, 4x antialiasing, 16x anisotropic filtering). 139645

  This is not an NVIDIA bug, but an issue with the application.

- GeForce 6600, GeForce FX 5600 Ultra: There is intermittent corruption on the first warning screen of some DVD titles. 138285

  A patch for this issue is available from Microsoft.

- GeForce 6600: Artifacts appear in the introduction videos and during game play in Tomb Raider: Angel of Darkness at 1600x1200 and with 4x antialiasing enabled.134704

  This is not an NVIDIA bug.

- GeForce 6200 256 MB: Windows Media Player 10 hangs when the desktop is rotated.200610

  This is an application issue and not an NVIDIA bug.

- GeForce 6200 (16MB/32MB): Game-loading errors occur with Tomb Raider Angel of Darkness.147806

  This is an issue with the application. You can work around this issue by switching off the video using the command line switch "`-no_fmv`".

- GeForce 6200 with TurboCache (16MB): A Direct3D out-of-memory error occurs in Unreal Tournament 2003 when using the HardOCP Benchmark Utility version 2.1.157773

  This is not an NVIDIA bug.

- GeForce 6 Series: Stuttering occurs in the game EverQuest II.

  In-game stuttering can occur as the result of the following system conditions:

  - Using high-quality/maximum-visual game settings on a PC with less than 1.5 GB of system memory—EverQuest II's highest quality settings are extremely hardware intensive (graphics, memory, and CPU).
  - Misconfigured AGP aperture settings and fragmented hard disks can also contribute to in-game stuttering.

- GeForce 6 Series, Windows XP: There is no difference in lighting after turning the flashlight on and off a few times in Half-Life 2, resulting in darkness even with the flashlight on. 156629

  This is not an NVIDIA bug, but rather an issue with the application.

Not NVIDIA Issues–SLI Mode

- [SLI], GeForce 8800 GTX: Neverwinter Nights 2– flickering occurs between screen transitions when SLI is enabled.[296352]
- 219735 GeForce 7950 GX2 Quad NVIDIA SLI, GeForce 7900, GeForce 6800: NHL 2006– with SLI mode enabled, the screen flickers several times when exiting back to the menu from gameplay.

  This is not an NVIDIA bug, but rather an issue with the application.

- 239600 GeForce 7900 GT/GS, Dual-Core System, SLI: With SLI mode enabled, the game Flat Out stops responding after starting a game.

  This is not an NVIDIA bug, but an issue with the OS. To resolve the issue, install the Windows Dual-Core patches.

- 196348 GeForce 7800 GTX/GT, SLI: The load balancing line is corrupted when playing Civilizations 4 at 2560x1600.

  This is not an NVIDIA bug, but a visual effect resulting from the interaction between the frame rate and the update rate of the split line.

  - 196320 SLI mode does not appear capable of being enabled with City of Villains.

This issue occurs because City of Heroes and City of Villains share the same executable name.

You can work around this issue by either

- *modifying the City of Heroes application profile (this will create a second City of Heroes profile) to enable SLI AFR mode, or*
- *set AFR as the rendering mode in Global Profile.*

For more information on customizing SLI profiles, visit www.slizone.com *and navigate to Learn More->How-to Guides.*

- [SLI], GeForce 6 and 7 Series: SLI does not work with OpenGL applications when the SLI control panel page is open. 199406

  This is the correct behavior with SLI rendering. If you need to adjust SLI settings for an OpenGL application you must adjust the NVIDIA control panel settings with the application closed, then close the control panel and open the application.

- GeForce 6 and 7 Series, SLI, Windows XP: With SLI enabled, Call of Duty 2 performance appears to be slow.

  For optimal SLI performance in Call of Duty 2, you must select 'YES' for 'Optimize for SLI' in the Graphics section of System Settings.

- 195807 GeForce 6 and 7 Series, SLI, Windows XP: After selecting 'YES' for 'Optimize for SLI' in the Graphics section of System Settings when playing Call of Duty 2, the setting resets to 'No' every time you restart the game.

  The problem is that the setting does not get saved to the player's config file. You must make sure 'YES' is selected each time you launch the application or you can ensure the setting gets written to the config file in one of the following ways:

  - *Type "seta r_multiGpu 1" in the console, or*
  - *Add "seta r_multiGpu 1" to the shortcut, or*
  - *Add "seta r_multiGpu 1" directly to your config.cfg and config_mp.cfg files in your directory under the "main/players" folder.*

- 193105 With SLI enabled, the SLI split line does not appear when VSync is forced on.

  This is not a bug, and the applications are, in fact, running in SLI mode. The SLI split line/load bar is not supposed to appear when Vsync is enabled in SLI mode.

- 159990 GeForce 6800/6600 GT: Slow performance with World of Warcraft in SLI mode.

  This is not an NVIDIA bug, but instead the result of a recent patch for World of Warcraft to reduce mouse lag on slower computers by synchronizing the GPU(s). This change is unnecessary for NVIDIA users, and particularly for users with SLI configurations.

  For optimal performance when playing World of Warcraft in SLI mode:

  - Disable vertical sync within the World of Warcraft in-game video options.
  - Enable "hardware mouse" acceleration and disable "smooth mouse" within the World of Warcraft in-game video options.

    "Smooth mouse" reduces mouse lag when the frame rate is low and "hardware mouse" is disabled.

Known Product Limitations

This section describes problems that will not be fixed. Usually, the source of the problem is beyond the control of NVIDIA. Following is the list of problems and where they are discussed in this document:

- "Using HDMI/DisplayPort Audio with Displays that have a High Native Resolution" on page 22
- "Using HDMI/DisplayPort Displays that do not Support Audio" on page 22
- "Using HDMI/DisplayPort Audio in Dualview or Clone Mode Configurations" on page 23
- "GPU Runs at a High Performance Level (full clock speeds) in Multi-display Modes" on page 23
- "GeForce GTX 295 Fan Control and NVIDIA Control Panel Performance Group version 6.03.06.00" on page 23
- "1280x1024 @ 60 Hz not Available on BenQ FP241W Monitors" on page 24
- "GeForce 6 and 7 Series Cards Cannot Output Interlaced Signals in SLI Mode [251457]" on page 24
- "Image Sharpening Control not Available with GeForce 8 Series and Later GPUs" on page 24
- "Display Output Selection not Available on "Bridgeless" SLI" on page 24
- "More Monitors are Listed in the Windows Device Manager than are Actually Connected" on page 25
- "DirectX Fails When Detaching/Reattaching Displays in Dualview Mode" on page 25
- "OpenGL Viewport Scaling Problem in Horizontal Span Mode" on page 25
- "Video Playback in nView Clone and Span Modes" on page 25
- "No Antialiasing of 3DMark03 Image Quality Screen Captures" on page 26
- "Medal of Honor Under Windows XP / Windows 2000" on page 27
- "Windows XP/2000 Issue with Settings Tab Monitor Positioning" on page 27
- "Antialiasing Problems With Certain Applications" on page 27
- "Poor Quality S-Video Output on Some TVs" on page 28
- "AGP and PCI-E Programs May Hang With AMD K7 and K8 Processors" on page 28
- "Desktop Manager Does Not Re-Center Logon Screen" on page 29

Using HDMI/DisplayPort Audio with Displays that have a High Native Resolution

To use HDMI/DisplayPort audio with some displays that have a native resolution higher than 1920x1080, you must set the display to a lower HD resolution.

Some HDMI TV's have a native resolution that exceeds the maximum supported HD mode. For example, TVs with a native resolution of 1920x1200 exceed the maximum supported HD mode of 1920x1080.

Applying this native mode results in display overscan which cannot be resized using the NVIDIA Control Panel since the mode is not an HD mode.

To avoid this situation and provide a better user experience, the driver treats certain TVs–such as the Viewsonic VX2835wm and the Westinghouse LVM- 37w3–as a DVI monitor when applying the native mode. Because the driver does not treat the TV as an HDMI in this case, the HDMI audio is not used.

Using HDMI/DisplayPort Displays that do not Support Audio

Some HDMI/DisplayPort displays do not support audio, or have issues with current NVIDIA graphics cards.

The NVIDIA driver attempts to identify such displays and automatically disables the audio. For example, the NVIDIA driver disables HMDI audio for all Philips HDMI TVs, as these have been identified as having issues with current NVIDIA graphics cards.

There may be cases where either the driver disables audio even though there is no problem, or does not disable the audio when in fact the audio does not work. The following sections describe these situations and provides guidance for handling them.

Corrupted video and no audio

The driver has not disabled audio and the display's audio signal is incompatible with the graphics card, causing video corruption.

With a different display connected in order to establish video, disable audio for the HDMI display using the NVIDIA Control Panel-> Change Resolution page. From the connector list, select **HDMI-HDTV (Audio Disabled)**.

Video but no audio

Check the connector list on the NVIDIA Control Panel->Change Resolution page.

- If **HDMI-HDTV (Audio Disabled)** is selected and you want to test whether your HDMI audio does, in fact, work, then select **HDMI-HDTV (Audio Enabled)** and the driver will prompt you with instructions for testing HDMI audio with the display.
- If **HDMI-HDTV (Audio Enabled)** is selected, then the driver has not successfully detected that an incompatible display is connected.

  Future drive versions will properly identify such displays and disable audio.
- If there is no HDMI connector option in the NVIDIA Control Panel->Change Resolution page, the display does not support audio and has properly reported this to the NVIDIA driver.

Using HDMI/DisplayPort Audio in Dualview or Clone Mode Configurations

Two Audio-enabled Ports

In a multi-display configuration where both HDMI/DisplayPort audio ports are enabled, only the primary display will provide the audio.

One Audio-enabled Port

In a multi-display configuration where only one audio port is enabled, such as when one display is a DVI display, then the HDMI/DisplayPort display can provide the audio whether is it the primary or secondary display.

GPU Runs at a High Performance Level (full clock speeds) in Multi-display Modes

This is a hardware limitation and not a software bug. Even when no 3D programs are running, the driver will operate the GPU at a high performance level in order to efficiently drive multiple displays. In the case of SLI or multi-GPU PCs, the second GPU will always operate with full clock speeds; again, in order to efficiently drive multiple displays. Today, all hardware from all GPU vendors have this limitation.

GeForce GTX 295 Fan Control and NVIDIA Control Panel Performance Group version 6.03.06.00

The GeForce GTX 295 fan control does not function properly when using the NVIDIA Control Panel Performance Group version 6.03.06.00. For proper fan control, use version 6.03.12.00 or later.

1280x1024 @ 60 Hz not Available on BenQ FP241W Monitors

Even though the monitor EDID lists 1280x1024 @ 60 Hz, the screen turns blank when using an HDMI connection. This is an issue with the monitor and not the NVIDIA driver.

Because of this issue with the monitor, the NVIDIA driver blocks the problem mode (1280x1024 @ 60 Hz) and makes it unavailable.

GeForce 6 and 7 Series Cards Cannot Output Interlaced Signals in SLI Mode [251457]

▶ **Problem**

Rendering problems and instability occur when outputting interlaced modes (480i, 576i and 1080i) over the Y Pr Pb component and DVI outputs.

▶ **Explanation**

This is a hardware limitation in SLI mode only and cannot be fixed via a driver update.

▶ **Resolution**

Due to this issue, starting in driver version 162.18 in Windows XP, the driver will automatically disable SLI mode when using the 480i, 576i and 1080i modes over all connectors on the GeForce 6 and 7 series GPUs.

To re-enable SLI mode, you must choose a non-interlaced output mode and reboot your computer.

- GeForce 8 series GPUs do not have this hardware limitation and you can output all HDTV interlaced and progressive scan outputs in SLI mode.
- The 480p, 576p, 720p, and 1080p progressive scan modes do not have this issue in SLI mode and are not affected by this change.

Image Sharpening Control not Available with GeForce 8 Series and Later GPUs

With GeForce 8 Series and later graphics cards, the **Image sharpening** slider on the NVIDIA Control Panel-> Display->Adjust Desktop Color Settings page is grayed out.

This control is intentionally disabled because image sharpening is not supported on GeForce 8 series and later GPUs.

Display Output Selection not Available on “Bridgeless” SLI

On graphics cards that can operate in SLI mode without the SLI connector (such as the GeForce 6600), you cannot select which monitor to display the output. On the SLI display property page, the option box to select the output display is not available.

More Monitors are Listed in the Windows Device Manager than are Actually Connected

▶ **Problem**

Many monitors are listed in the Windows Device Manager hardware tree even when only a few are actually connected or enabled.

▶ **Explanation**

NVIDIA chooses to expose all potential monitors even though they are not yet connected. Such an implementation makes multiple device handling easier in certain situations, such as when a user unplugs a monitor and plugs another one in at a different port.

The only impact is a cosmetic in the plug-and-play manager. There is no functional impact at all and the GDI is not aware of the multiple monitor listing.

DirectX Fails When Detaching/Reattaching Displays in Dualview Mode

This problem can be duplicated as follows:

1. Enable both displays in Dualview mode.
2. Detach monitor 2 and apply settings.
3. Reattach monitor 2 and apply settings.

   DirectX runtime fails on monitor 1.

This is not an NVIDIA bug, but a limitation in the operating system where DirectX does not enumerate the second device. DirectX can be restored to both displays by rebooting the system

OpenGL Viewport Scaling Problem in Horizontal Span Mode

With nView Horizontal Span mode enabled, when opening an OpenGL model in a viewport, the model image is scaled too large to fit in the viewport. The problem occurs with such applications as Maya 5.0 and 3D Studio MAX 4.26.

This is not an NVIDIA bug, but a limitation in the application's ability to properly maintain the aspect ratio in Horizontal Span mode.

Video Playback in nView Clone and Span Modes

▶ **Problem**

With nView Clone or Span mode enabled, video playback appears on only one display under the following conditions:

- Under nView Clone mode, when full-screen video mirror is not used.
- Under nView Span mode, when full-screen video mirror is not used and the video is positioned to span across both monitors.

▶ **Explanation**

With applications that render using the hardware overlay—such as DirectX applications—the default driver behavior is to enable the hardware overlay when nView Clone or Span mode is enabled.

Because the driver supports only one hardware overlay, the video appears on only one display.

No Antialiasing of 3DMark03 Image Quality Screen Captures

▶ **Problem**

After enabling antialiasing from the NVIDIA Properties page, 3DMark03 screen captures—obtained using the application's screen capture function—might not be antialiased.

▶ **Explanation**

This is not an NVIDIA bug, but rather a result of different methods used to render antialiased images.

Depending on a combination of factors, the driver may take advantage of the NVIDIA hardware's ability to bypass the front buffer while rendering an antialiased image. In this case, the front buffer does not contain antialiased data, so if an application takes data from the front buffer—as is the case with 3DMark03's Image Quality screen captures—then the resulting image is not antialiased.

To accommodate applications that request use of the front buffer, the NVIDIA software can provide the antialiased data in a buffer to the application. Since this negates the advantages of the NVIDIA hardware capability, this support is enabled only when antialiasing is enabled within the application, and not from the NVIDIA control panel.

In all cases when antialiasing is enabled, screen images as well as screen captures obtained using the Print Screen key are always antialiased.

Medal of Honor Under Windows XP / Windows 2000

▶ **Problem**

The Electronic Arts game Medal of Honor uses a hard coded buffer to parse the OpenGL extension string. This can cause a system crash under Windows XP and Windows 2000.

▶ **Workaround**

NVIDIA has implemented Medal of Honor application detection to work around this extension string crash.

Windows XP/2000 Issue with Settings Tab Monitor Positioning

▶ **Problem**

In the Windows **Display Properties > Settings** tab, the secondary monitors cannot be positioned directly above monitor #1 without snapping horizontally to a position diagonal to monitor #1.

▶ **When the Problem Occurs**

The problem occurs when four monitors are connected to the graphics adapter card, but only two of them are enabled.

▶ **Cause and Workaround**

This is a Microsoft—not an NVIDIA—bug, and there is no workaround to correct the positioning of the monitor icons. However, the actual positioning of the displays on the desktop can be corrected using the nView Desktop Manager window as follows:

a Under the Tools tab in the Desktop Manager windows, make sure Automatically Align Displays is checked.

b In the Settings tab, position the appropriate monitor icon above monitor #1, then click **Apply**.

The mouse cursor movement between monitor desktops will correspond to a vertical orientation of the monitors, even though the monitor icons in the Settings tab are diagonal to each other.

Note: This will be the case even if the monitor icons are deliberately positioned diagonal to each other.

Antialiasing Problems With Certain Applications

Antialiasing in the NVIDIA Direct3D driver requires each new frame to be rendered from scratch. This requirement adversely affects applications that render only that portion of the content that has changed since the last frame. A common symptom of this

problem is geometric structures that incorrectly disappear and re-appear as the scene shifts.

Poor Quality S-Video Output on Some TVs

NVIDIA drivers differentiate an S-video TV from a composite TV by searching for 75-Ohm loads on the chrominance and luminance lines. If the driver detects only one such load, it assumes that it has a composite TV and drives both chroma and luma onto that line. This approach allows both types of TV to display in color.

Unfortunately, some S-video TVs do not apply the correct load to both lines, causing the driver to detect an S-video TV as a composite. The driver, in turn, sends the lower quality signal to the S-video TV. To work around this problem, use the Control Panel to override the **Auto-select** feature. This can be done following these steps:

1. In the **Settings** tab of the **Display Properties** Control Panel, click **Advanced**.
2. In the **nView** tab, click **Device Settings** and click **Select Output Device**.
3. In the **Device Selection** tab, click the **TV** option.
4. Change the **Video output format** to **S-video**.

AGP and PCI-E Programs May Hang With AMD K7 and K8 Processors

- **Issue**

  Microsoft® Windows® 2000 and Windows XP systems using AMD K7 and K8 processors can hang when an AGP or PCI-E program is used.

- **Root Cause**

  There is a known problem with Microsoft® Windows® 2000 and Windows XP systems using AMD K7 and K8 CPUs that results in the Microsoft operating system allocating overlapping 4M cached pages with 4k write-combined pages. This condition results in undefined behavior and data corruption, and is explicitly disallowed by the AMD CPU manual.

  This problem can affect any device driver in the system that allocates write-combined system memory, but is usually most easily reproduced with graphics drivers since graphics drivers generally make heavy use of write-combined system memory for performance reasons.

- **Resolution**

  Microsoft has a knowledge base article on the issue, the text of which is unfortunately quite outdated. While the article only mentions Windows 2000, AGP, and K7, both the root cause and resolution also apply to Windows 2000 or Windows XP, AGP or PCI-E, and AMD K7 or K8. The article can be found at http://support.microsoft.com/?id=270715.

The issue is resolved by applying an operating system registry key as described in the referenced article that instructs the Microsoft operating system to not use the 4M pages, thus avoiding the conflict.

The registry key is automatically applied by installation of the latest NVIDIA nForce platform driver package (including 4.57 SMBUS or later). It is imperative for the package to be installed or for the registry key to be applied before the NVIDIA graphics driver or any other device drivers are installed. The registry key takes effect only after an operating system reboot.

Desktop Manager Does Not Re-Center Logon Screen

On Windows XP multi-display systems that are set to nView Span mode, the Windows logon screen is centered on the extended desktop. This usually causes it to be split across two displays, which users may find annoying. Although users can normally use the Desktop Manager to restrict a window's appearance to one display, security restrictions in the operating systems prevent this in the case of the logon screen.

03 THE RELEASE 260 DRIVER FOR WINDOWS XP

This chapter covers the following main topics:

- "About the Release 260 Driver" on page 30
- "Hardware and Software Support" on page 31
- "Driver Installation" on page 38

About the Release 260 Driver

This driver release is from the Release 260 family of drivers. This driver package supports GeForce 6, 7, 8, 9, 100, 200, 300, and 400-series desktop GPUs as well as ION desktop GPUs.

The notebook driver is part of the NVIDIA Verde Notebook Driver Program, and can be installed on supported NVIDIA notebook GPUs. However, please note that your notebook original equipment manufacturer (OEM) provides certified drivers for your specific notebook on their website. NVIDIA recommends that you check with your notebook OEM about recommended software updates for your notebook. OEMs may not provide technical support for issues that arise from the use of this driver.

Hardware and Software Support

Supported Operating Systems

This Release 260 driver includes drivers designed for the following Microsoft® operating systems:

- Microsoft Windows® XP
  - Windows XP Media Center Edition 2005 Update Rollup2
  - Windows XP Media Center Edition 2005
  - Windows XP Media Center Edition 2004
  - Windows XP Professional
  - Windows XP Home Edition
  - Windows XP Professional x64 Edition

Supported NVIDIA Desktop Products

Table 3.1 lists the NVIDIA GPUs supported by this Release 260 driver.

Table 3.1 Supported NVIDIA Consumer Products

Product	Windows XP 32-bit	Windows XP Professional x64
ION	X	X
ION LE	X	X
GeForce GTX 480	X	X
GeForce GTX 470	X	X
GeForce GTX 465	X	X
GeForce GTX 460	X	X
GeForce GTX 295	X	X
GeForce GTX 285	X	X
GeForce GTX 280	X	X
GeForce GTX 275	X	X
GeForce GTX 260	X	X
GeForce GTS 450	X	X
GeForce GTS 250	X	X
GeForce GTS 240	X	X
GeForce GT 430	X	X

Table 3.1 Supported NVIDIA Consumer Products (continued)

Product	Windows XP 32-bit	Windows XP Professional x64
GeForce GT 340	X	X
GeForce GT 330	X	X
GeForce GT 320	X	X
GeForce GT 240	X	X
GeForce GT 200	X	X
GeForce G210	X	X
GeForce 210	X	X
GeForce 205	X	X
GeForce GT 140	X	X
GeForce GT 130	X	X
GeForce GT 120	X	X
GeForce G100	X	X
GeForce 9800 GX2	X	X
GeForce 9800 GTX+	X	X
GeForce 9800 GTX	X	X
GeForce 9800 GT	X	X
GeForce 9600 GT	X	X
GeForce 9600 GS	X	X
GeForce 9600 GSO	X	X
GeForce 9500 GT	X	X
GeForce 9500 GS	X	X
GeForce 9400 GT	X	X
GeForce 9400	X	X
GeForce 9300 GS	X	X
GeForce 9300 GE	X	X
GeForce 9300	X	X
GeForce 9200	X	X
GeForce 8800 Ultra	X	X
GeForce 8800 GTX	X	X
GeForce 8800 GTS 512	X	X
GeForce 8800 GTS	X	X
GeForce 8800 GT	X	X
GeForce 8600 GTS	X	X
GeForce 8600 GT	X	X

Table 3.1 Supported NVIDIA Consumer Products (continued)

Product	Windows XP 32-bit	Windows XP Professional x64
GeForce 8600 GS	X	X
GeForce 8500 GT	X	X
GeForce 8400 GS	X	X
GeForce 8400 SE	X	X
GeForce 8400	X	X
GeForce 8300 GS	X	X
GeForce 8300	X	X
GeForce 8200	X	X
GeForce 8100/NVIDIA nForce 720a	X	X
NVIDIA nForce 780a	X	X
NVIDIA nForce 750a	X	X
NVIDIA nForce 730a	X	X
GeForce 7950 GX2	X	X
GeForce 7950 GT	X	X
GeForce 7900 GTX	X	X
GeForce 7900 GT/GTO	X	X
GeForce 7900 GS	X	X
GeForce 7800 SLI	X	X
GeForce 7800 GTX	X	X
GeForce 7800 GT	X	X
GeForce 7800 GS	X	X
GeForce 7650 GS	X	X
GeForce 7600 GT	X	X
GeForce 7600 GS	X	X
GeForce 7600 LE	X	X
GeForce 7500 LE	X	X
GeForce 7350 LE	X	X
GeForce 7300 SE	X	X
GeForce 7300 LE	X	X
GeForce 7300 GT	X	X
GeForce 7300 GS	X	X
GeForce 7200 GS	X	X
GeForce 7100 GS	X	X
GeForce 7150 / NVIDIA nForce 630i	X	X

Table 3.1 Supported NVIDIA Consumer Products (continued)

Product	Windows XP 32-bit	Windows XP Professional x64
GeForce 7100 / NVIDIA nForce 630i	X	X
GeForce 7050 / NVIDIA nForce 630i	X	X
GeForce 7050 / NVIDIA nForce 610i	X	X
GeForce 7100 / NVIDIA nForce 620i	X	X
GeForce 7050 PV / NVIDIA nForce 630a	X	X
GeForce 7025 / NVIDIA nForce 630a	X	X
GeForce 6800 XT	X	X
GeForce 6800 XE	X	X
GeForce 6800 Ultra	X	X
GeForce 6800 Series GPU	X	X
GeForce 6800 LE	X	X
GeForce 6800 GT	X	X
GeForce 6800 GS/XT	X	X
GeForce 6800 GS	X	X
GeForce 6800	X	X
GeForce 6700 XL	X	X
GeForce 6610 XL	X	X
GeForce 6600 VE	X	X
GeForce 6600 LE	X	X
GeForce 6600 GT	X	X
GeForce 6600	X	X
GeForce 6500	X	X
GeForce 6250	X	X
GeForce 6200SE TurboCache™	X	X
GeForce 6200 TurboCache™	X	X
GeForce 6200 LE	X	X
GeForce 6200 A-LE	X	X
GeForce 6200	X	X
GeForce 6150SE nForce 430	X	X
GeForce 6150 LE	X	X
GeForce 6150	X	X
GeForce 6100 nForce 420	X	X
GeForce 6100 nForce 405	X	X
GeForce 6100 nForce 400	X	X

Table 3.1 Supported NVIDIA Consumer Products (continued)

Product	Windows XP 32-bit	Windows XP Professional x64
GeForce 6100	X	X

Supported NVIDIA Notebook Products

The following tables list the NVIDIA notebook products supported by the Release 260 driver, version 260.89:

Note:

Hybrid Power technology with Intel chipsets is not supported by this release.

Sony has joined the Verde program by supporting the following VAIO notebooks: Sony F Series with NVIDIA GeForce 310M and Sony F Series with NVIDIA GeForce GT 330M. Other Sony VAIO notebooks are not supported at this time (please contact Sony for driver support).

Table 3.2 Supported NVIDIA Notebook GPUs

Consumer Products
ION
ION LE
GeForce GTX 480M
GeForce GTS 360M GeForce GTS 350M GeForce GTS 250M GeForce GT 335M GeForce GT 330M GeForce GT 325M GeForce 310M GeForce 305M GeForce GTX 285M
GeForce GTX 280M
GeForce GTX 260M
GeForce GT 240M

Table 3.2 Supported NVIDIA Notebook GPUs

Consumer Products
GeForce GT 230M
GeForce GT 220M
GeForce GTS 160M
GeForce GT 130M
GeForce GT 120M
GeForce G 210M
GeForce G 110M
GeForce G 107M
GeForce G 105M
GeForce G 103M
GeForce G 102M
GeForce 9800M GTX
GeForce 9800M GTS
GeForce 9800M GT
GeForce 9800M GS
GeForce 9700M GTS
GeForce 9700M GT
GeForce 9650M GT
GeForce 9650M GS
GeForce 9600M GT
GeForce 9600M GS
GeForce 9500M GS
GeForce 9500M G
GeForce 9400M G
GeForce 9400M
GeForce 9300M GS
GeForce 9300M G
GeForce 9200M GS
GeForce 9200M GE
GeForce 9100M G
GeForce 8800M GTX
GeForce 8800M GTS
GeForce 8800M GS
GeForce 8700M GT
GeForce 8600M GT

Table 3.2 Supported NVIDIA Notebook GPUs

Consumer Products
GeForce 8600M GS
GeForce 8400M GT
GeForce 8400M GS
GeForce 8400M G
GeForce 8200M G

Table 3.3 Supported NVIDIA Quadro NVS M GPUs

Consumer Products
Quadro NVS 3100M Quadro NVS 5100M
Quadro NVS 320M
Quadro NVS 160M
Quadro NVS 150M
Quadro NVS 140M
Quadro NVS 135M
Quadro NVS 130M

Table 3.4 Supported NVIDIA Quadro FX M GPUs

Consumer Products
Quadro FX 3800M Quadro FX 3700M
Quadro FX 3600M
Quadro FX 2800M Quadro FX 2700M
Quadro FX 1800M Quadro FX 1700M
Quadro FX 1600M
Quadro FX 880M Quadro FX 770M
Quadro FX 570M
Quadro FX 380M Quadro FX 370M
Quadro FX 360M

Supported Languages

The Release 260 Graphics Drivers supports the following languages in the main driver Control Panel:

English (USA)	German	Portuguese (Euro/ Iberian)
English (UK)	Greek	Russian
Arabic	Hebrew	Slovak
Chinese (Simplified)	Hungarian	Slovenian
Chinese (Traditional)	Italian	Spanish
Czech	Japanese	Spanish (Latin America)
Danish	Korean	Swedish
Dutch	Norwegian	Thai
Finnish	Polish	Turkish
French	Portuguese (Brazil)	

Driver Installation

System Requirements

The hard disk space requirement for 32 bit is minimum 120 MB for English-only, and 172 MB for International.

The hard disk space requirement for 64 bit is minimum 140 MB for English-only, and 186 MB for International.

Before You Begin

If you do not have System Administrator access privileges, it is assumed that the appropriate person with System Administrator access in your organization will set up and install the NVIDIA graphics driver software on your computer.

Notebooks

- Check to make sure that your notebook has a supported GPU and is not listed in the exclusion list (see "Supported NVIDIA Notebook Products" on page 35).
- It is recommended that you back up your current system configuration.
- If you own a Dell Inspiron 1420, Dell XPS M1330, Dell XPS M1530. Dell Latitude D630 or D630c, it is highly recommended that you first install this Dell software update.

nTune

- **If NVIDIA nTune is already installed**

  If you have previously installed NVIDIA nTune, NVIDIA recommends that you uninstall nTune before installing this driver. After the driver install is complete, you can reinstall nTune.

Copied Files and Registration

- The installation process copies all necessary files for operation into the appropriate directories.
- The nView system files are copied to your **`Windows\System`** directory.
- nView Desktop Manager Profile files (*.**tvp**) are saved in the **`Windows\Nview`** directory.

  Depending on the version of the NVIDIA driver previously installed, profiles may also be located in the **`Documents and Settings\All Users\Application Data\nView_Profiles`** directory.
- As part of the install process, an uninstall is registered in your system.

Preserving Settings Before Upgrading Your Software

Before uninstalling or installing software, your can preserve your nView Desktop Manager and/or NVIDIA Display settings by using the nView Desktop Manager Profiles features.

Note: Follow the steps below and/or refer to the *NVIDIA nView Desktop Manager User's Guide* for details. Under Windows XP/2000 and Windows NT 4.0, you must have, at least, **Power User** access privileges in order to create or save a profile. (Refer to Windows Help if you need an explanation of Power User access rights.)

Follow the steps below and/or refer to the *NVIDIA nView Desktop Manager User's Guide* for details.

1. Open the nView Desktop Manager Profiles page (Figure 4.1).
2. To preserve your current settings, you can use either the **Save** or the **New** option from the nView Desktop Manager Profiles page:
   - If you want to overwrite the currently loaded profile with your changed settings, use the **Save** option. Notice that a warning message indicates that you are about to overwrite the selected profile.
   - If you want to retain the currently loaded profile and want to save your changed settings to a new file, click the **New** option. Enter a name and description of the profile in the New Profile dialog box. For example, you can name this profile **`My Settings`**.
3. If you are an "advanced" user and want to customize certain settings in the saved profile, click **Advanced** << to expand the dialog box (Figure 4.2).
4. To customize the settings, you can select or clear any of the settings check boxes.

5 Click **Save** to return to the main Profiles page.

If you created a new profile, you will see the name of the newly created profile in the profiles list.

If you overwrote a current profile, the same profile name is retained in the list.

Note: nView Desktop Manager profile (**.tvp**) files are saved in the **Windows\nView** directory. Depending on the version of the NVIDIA driver previously installed, profiles may also be saved in the **Documents and Settings\All Users\Application Data\nView_Profiles** directory.

6 Now you can uninstall your current driver for a driver upgrade.

7 After you restart your computer following an NVIDIA new driver install, you can easily load the saved profile from the Profiles page of nView Desktop Manager.

About Using Saved Profiles in Another Computer

You can easily use any saved profile (**.tvp** file in the **Windows\nView** directory) from one computer and use it in another computer, if you want. You'll need to copy it to the **Windows\nView** directory of a computer that has the NVIDIA ForceWare graphics display driver, etc. installed properly. Then this profile can be loaded from another computer from the nView Desktop Manager Profiles page just as it can from your original computer.

Uninstalling the NVIDIA Display Driver Software

Note: It is highly recommended that you follow the steps in this section to completely uninstall the NVIDIA Display Driver software before updating to a new version of the software.

To uninstall the nView software, follow these steps:

1 From the Windows taskbar, click **Start** > **Settings** > **Control Panel** to open the Control Panel window.

2 Double-click the **Add/Remove Programs** item.

3 Click the **NVIDIA Display Driver** item from the list.

4 Click **Change/Remove**.

5 Click **Yes** to continue.

A prompt appears asking whether you want to delete all of the saved nView profiles.

- If you click **Yes**, all of the nView software and all of your saved profiles will be deleted.
- If you click **No**, the nView software is removed, but the profile files are saved in the `Windows\nView` directory on your hard disk.

Your system now restarts.

Installing the NVIDIA Graphics Drivers

1. Follow the instructions on the NVIDIA .com Web site driver download page to locate the appropriate driver to download, based on your hardware and operating system.
2. Click the driver download link.

   The license agreement dialog box appears.
3. Click **Accept** if you accept the terms of the agreement, then either open the file or save the file to your PC and open it later.
4. Open the NVIDIA driver installation .EXE file to launch the NVIDIA InstallShield Wizard.
5. Follow the instructions in the NVIDIA InstallShield Wizard to complete the installation.

Note: Under Windows XP, the NVIDIA driver is installed in "Dual-view mode" display. However, note that the second display is not activated by default, but must be enabled.

APPENDIX A MODE SUPPORT FOR WINDOWS

This chapter details the Windows modes supported by the Release 260 driver for NVIDIA products. It contains these sections:

- "General Mode Support Information" on page 44
- "Default Modes Supported by GPU for Windows XP" on page 45
- "Modes Supported by TV Encoders" on page 56

General Mode Support Information

The NVIDIA graphics driver includes a standard list of display modes that are supported by default. These modes are listed in the section "Default Modes Supported by GPU for Windows XP" on page 45.

The actual modes available depend on the capabilities of the display. In addition, the NVIDIA graphics driver has a "dynamic EDID detection" capability and will make available *additional* modes that are listed in the display EDID, provided the graphics hardware can support it.

The NVIDIA graphics driver also supports the high resolutions available with the displays listed in Table A.1 as well as the non-standard modes listed in Table A.2.

Table A.1 Modes Supported for High Resolution Displays

Display	Maximum Resolution
Apple 30" Cinema HD Display (Dual link DVI)	2560x1600 @ 60 Hz
Dell WFP 3007 (Dual Link DVI)	2560x1600 @ 60 Hz
HP LP3065 dual-link DVI flat panel	2560x1600 @ 60Hz.

Table A.2 Non-standard Modes Supported

Resolution		
1680 x 1050		
1366 x 768		

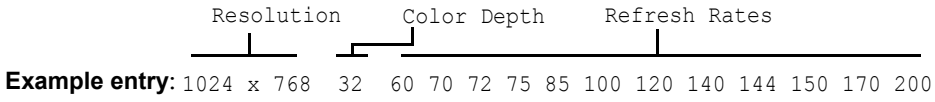
Default Modes Supported by GPU for Windows XP

This section lists the modes that are included by default in the driver INF for the following product families:

▶ "GeForce 400, 300, 200, 100, 9 Series, 8 Series, 7 Series, 6 Series, and nForce 7xx/6xx GPUs" on page 46

Understanding the Mode Format

Figure A.1 gives an example of how to read the mode information presented in this section.



Meaning:
Resolution: 1024 x 768
Color depth: 32 bpp
Refresh rates: 60 Hz, 70 Hz, 72 Hz, 75 Hz, 85 Hz, 100 Hz, 120 Hz, 140 Hz, 144 Hz, 150 Hz, 170 Hz, and 200 Hz

Figure A.1 Mode Format

Note:

- Horizontal spanning modes of 3840x1080 and above, and vertical spanning modes of 1920x2160 and above generally require at least 32 MB of video memory at 32 bpp.
- An "i" next to the refresh rate indicates an interlaced refresh rate.

GeForce 400, 300, 200, 100, 9 Series, 8 Series, 7 Series, 6 Series, and nForce 7xx/6xx GPUs

This sections lists the supported display resolutions, color depths, and refresh rates for the products listed in "Supported NVIDIA Desktop Products" on page 31.

Standard Modes

```
 640 x  480   8      60 70 72 75 85 100 120 140 144 150 170 200 240
 720 x  480   8      60
 720 x  576   8   50 60
 800 x  600   8      60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x  768   8      60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x  864   8      60 70 72 75 85 100 120 140 144 150 170 200
1280 x  720   8      60
1280 x  768   8      60 70 72 75 85 100 120 140 144 150 170
1280 x  800   8      60 70 72 75 85 100 120 140 144 150 170
1280 x  960   8      60 70 72 75 85 100 120 140 144 150 170
1280 x 1024   8      60 70 72 75 85 100 120 140 144 150 170
1360 x  768   8      60 70 72 75 85 100 120 140 144 150 170
1600 x  900   8      60 70 72 75 85 100 120 140 144 150
1600 x 1024   8      60 70 72 75 85 100 120
1600 x 1200   8      60 70 72 75 85 100 120
1680 x 1050   8      60
1920 x 1080   8      60
1920 x 1200   8      60 70 72 75 85 100
1920 x 1440   8      60 70 72 75 85
2048 x 1536   8      60
--------------------------------------------------------------------
 640 x  480  16      60 70 72 75 85 100 120 140 144 150 170 200 240
 720 x  480  16      60
 720 x  576  16   50 60
 800 x  600  16      60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x  768  16      60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x  864  16      60 70 72 75 85 100 120 140 144 150 170 200
1280 x  720  16      60
1280 x  768  16      60 70 72 75 85 100 120 140 144 150 170
1280 x  800  16      60 70 72 75 85 100 120 140 144 150 170
1280 x  960  16      60 70 72 75 85 100 120 140 144 150 170
1280 x 1024  16      60 70 72 75 85 100 120 140 144 150 170
1360 x  768  16      60 70 72 75 85 100 120 140 144 150 170
1600 x  900  16      60 70 72 75 85 100 120 140 144 150
1600 x 1024  16      60 70 72 75 85 100 120
1600 x 1200  16      60 70 72 75 85 100 120
1680 x 1050  16      60
```

```
1920 x 1080  16      60
1920 x 1200  16      60 70 72 75 85 100
1920 x 1440  16      60 70 72 75 85
2048 x 1536  16      60
--------------------------------------------------------------------
 640 x  480  32      60 70 72 75 85 100 120 140 144 150 170 200 240
 720 x  480  32      60
 720 x  576  32   50 60
 800 x  600  32      60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x  768  32      60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x  864  32      60 70 72 75 85 100 120 140 144 150 170 200
1280 x  720  32      60
1280 x  768  32      60 70 72 75 85 100 120 140 144 150 170
1280 x  800  32      60 70 72 75 85 100 120 140 144 150 170
1280 x  960  32      60 70 72 75 85 100 120 140 144 150 170
1280 x 1024  32      60 70 72 75 85 100 120 140 144 150 170
1360 x  768  32      60 70 72 75 85 100 120 140 144 150 170
1600 x  900  32      60 70 72 75 85 100 120 140 144 150
1600 x 1024  32      60 70 72 75 85 100 120
1600 x 1200  32      60 70 72 75 85 100 120
1680 x 1050  32      60
1920 x 1080  32      60
1920 x 1200  32      60 70 72 75 85 100
1920 x 1440  32      60 70 72 75 85
2048 x 1536  32      60
```

Horizontal Spanning Modes

```
1280 x  480   8      60 70 72 75 85 100 120 140 144 150 170 200 240
1600 x  600   8      60 70 72 75 85 100 120 140 144 150 170 200 240
2048 x  768   8      60 70 72 75 85 100 120 140 144 150 170 200 240
2304 x  864   8      60 70 72 75 85 100 120 140 144 150 170 200
2560 x  720   8      60
2560 x  768   8      60 70 72 75 85 100 120 140 144 150 170
2560 x  800   8      60 70 72 75 85 100 120 140 144 150 170
2560 x  960   8      60 70 72 75 85 100 120 140 144 150 170
2560 x 1024   8      60 70 72 75 85 100 120 140 144 150 170
2720 x  768   8      60 70 72 75 85 100 120 140 144 150 170
3200 x  900   8      60 70 72 75 85 100 120 140 144 150
3200 x 1024   8      60 70 72 75 85 100 120
3200 x 1200   8      60 70 72 75 85 100 120
3360 x 1050   8      60
3840 x 1080   8      60
3840 x 1200   8      60 70 72 75 85 100
3840 x 1440   8      60 70 72 75 85
```

```
4096 x 1536   8      60
------------------------------------------------------------------
1280 x  480  16      60 70 72 75 85 100 120 140 144 150 170 200 240
1600 x  600  16      60 70 72 75 85 100 120 140 144 150 170 200 240
2048 x  768  16      60 70 72 75 85 100 120 140 144 150 170 200 240
2304 x  864  16      60 70 72 75 85 100 120 140 144 150 170 200
2560 x  720  16      60
2560 x  768  16      60 70 72 75 85 100 120 140 144 150 170
2560 x  800  16      60 70 72 75 85 100 120 140 144 150 170
2560 x  960  16      60 70 72 75 85 100 120 140 144 150 170
2560 x 1024  16      60 70 72 75 85 100 120 140 144 150 170
2720 x  768  16      60 70 72 75 85 100 120 140 144 150 170
3200 x  900  16      60 70 72 75 85 100 120 140 144 150
3200 x 1024  16      60 70 72 75 85 100 120
3200 x 1200  16      60 70 72 75 85 100 120
3360 x 1050  16      60
3840 x 1080  16      60
3840 x 1200  16      60 70 72 75 85 100
3840 x 1440  16      60 70 72 75 85
4096 x 1536  16      60
------------------------------------------------------------------
1280 x  480  32      60 70 72 75 85 100 120 140 144 150 170 200 240
1600 x  600  32      60 70 72 75 85 100 120 140 144 150 170 200 240
2048 x  768  32      60 70 72 75 85 100 120 140 144 150 170 200 240
2304 x  864  32      60 70 72 75 85 100 120 140 144 150 170 200
2560 x  720  32      60
2560 x  768  32      60 70 72 75 85 100 120 140 144 150 170
2560 x  800  32      60 70 72 75 85 100 120 140 144 150 170
2560 x  960  32      60 70 72 75 85 100 120 140 144 150 170
2560 x 1024  32      60 70 72 75 85 100 120 140 144 150 170
2720 x  768  32      60 70 72 75 85 100 120 140 144 150 170
3200 x  900  32      60 70 72 75 85 100 120 140 144 150
3200 x 1024  32      60 70 72 75 85 100 120
3200 x 1200  32      60 70 72 75 85 100 120
3360 x 1050  32      60
3840 x 1080  32      60
3840 x 1200  32      60 70 72 75 85 100
3840 x 1440  32      60 70 72 75 85
4096 x 1536  32      60
```

Vertical Spanning Modes

```
 640 x  960   8      60 70 72 75 85 100 120 140 144 150 170 200 240
 800 x 1200   8      60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x 1536   8      60 70 72 75 85 100 120 140 144 150 170 200 240
```

```
1152 x 1728   8      60 70 72 75 85 100 120 140 144 150 170 200
1280 x 1440   8      60
1280 x 1536   8      60 70 72 75 85 100 120 140 144 150 170
1280 x 1600   8      60 70 72 75 85 100 120 140 144 150 170
1280 x 1920   8      60 70 72 75 85 100 120 140 144 150 170
1280 x 2048   8      60 70 72 75 85 100 120 140 144 150 170
1360 x 1536   8      60 70 72 75 85 100 120 140 144 150 170
1600 x 1800   8      60 70 72 75 85 100 120 140 144 150
1600 x 2048   8      60 70 72 75 85 100 120
1600 x 2400   8      60 70 72 75 85 100 120
1680 x 2100   8      60
1920 x 2160   8      60
1920 x 2400   8      60 70 72 75 85 100
1920 x 2880   8      60 70 72 75 85
2048 x 3072   8      60
-------------------------------------------------------------------
 640 x  960  16      60 70 72 75 85 100 120 140 144 150 170 200 240
 800 x 1200  16      60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x 1536  16      60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x 1728  16      60 70 72 75 85 100 120 140 144 150 170 200
1280 x 1440  16      60
1280 x 1536  16      60 70 72 75 85 100 120 140 144 150 170
1280 x 1600  16      60 70 72 75 85 100 120 140 144 150 170
1280 x 1920  16      60 70 72 75 85 100 120 140 144 150 170
1280 x 2048  16      60 70 72 75 85 100 120 140 144 150 170
1360 x 1536  16      60 70 72 75 85 100 120 140 144 150 170
1600 x 1800  16      60 70 72 75 85 100 120 140 144 150
1600 x 2048  16      60 70 72 75 85 100 120
1600 x 2400  16      60 70 72 75 85 100 120
1680 x 2100  16      60
1920 x 2160  16      60
1920 x 2400  16      60 70 72 75 85 100
1920 x 2880  16      60 70 72 75 85
2048 x 3072  16      60
-------------------------------------------------------------------
 640 x  960  32      60 70 72 75 85 100 120 140 144 150 170 200 240
 800 x 1200  32      60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x 1536  32      60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x 1728  32      60 70 72 75 85 100 120 140 144 150 170 200
1280 x 1440  32      60
1280 x 1536  32      60 70 72 75 85 100 120 140 144 150 170
1280 x 1600  32      60 70 72 75 85 100 120 140 144 150 170
1280 x 1920  32      60 70 72 75 85 100 120 140 144 150 170
1280 x 2048  32      60 70 72 75 85 100 120 140 144 150 170
1360 x 1536  32      60 70 72 75 85 100 120 140 144 150 170
1600 x 1800  32      60 70 72 75 85 100 120 140 144 150
```

1600 x 2048	32	60 70 72 75 85 100 120
1600 x 2400	32	60 70 72 75 85 100 120
1680 x 2100	32	60
1920 x 2160	32	60
1920 x 2400	32	60 70 72 75 85 100
1920 x 2880	32	60 70 72 75 85
2048 x 3072	32	60

–

GeForce 9M, 8M, 100M, 200M, 300M, and 400M Series, and Quadro NVS and Quadro FX Notebook GPUs

This sections lists the supported display resolutions, color depths, and refresh rates for the products listed in "Supported NVIDIA Notebook Products" on page 35.

Standard Modes

```
 640 x  480   8      60 70 72 75 85 100 120 140 144 150 170 200 240
 720 x  480   8      60
 720 x  576   8   50 60
 800 x  600   8      60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x  768   8      60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x  864   8      60 70 72 75 85 100 120 140 144 150 170 200
1280 x  720   8      60
1280 x  768   8      60 70 72 75 85 100 120 140 144 150 170
1280 x  800   8      60 70 72 75 85 100 120 140 144 150 170
1280 x  960   8      60 70 72 75 85 100 120 140 144 150 170
1280 x 1024   8      60 70 72 75 85 100 120 140 144 150 170
1360 x  768   8      60 70 72 75 85 100 120 140 144 150 170
1600 x  900   8      60 70 72 75 85 100 120 140 144 150
1600 x 1024   8      60 70 72 75 85 100 120
1600 x 1200   8      60 70 72 75 85 100 120
1680 x 1050   8      60
1920 x 1080   8      60
1920 x 1200   8      60 70 72 75 85 100
1920 x 1440   8      60 70 72 75 85
2048 x 1536   8      60
--------------------------------------------------------------------
 640 x  480  16      60 70 72 75 85 100 120 140 144 150 170 200 240
 720 x  480  16      60
 720 x  576  16   50 60
 800 x  600  16      60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x  768  16      60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x  864  16      60 70 72 75 85 100 120 140 144 150 170 200
1280 x  720  16      60
1280 x  768  16      60 70 72 75 85 100 120 140 144 150 170
1280 x  800  16      60 70 72 75 85 100 120 140 144 150 170
1280 x  960  16      60 70 72 75 85 100 120 140 144 150 170
1280 x 1024  16      60 70 72 75 85 100 120 140 144 150 170
1360 x  768  16      60 70 72 75 85 100 120 140 144 150 170
1600 x  900  16      60 70 72 75 85 100 120 140 144 150
1600 x 1024  16      60 70 72 75 85 100 120
1600 x 1200  16      60 70 72 75 85 100 120
1680 x 1050  16      60
```

```
1920 x 1080  16      60
1920 x 1200  16      60 70 72 75 85 100
1920 x 1440  16      60 70 72 75 85
2048 x 1536  16      60
--------------------------------------------------------------------
 640 x  480  32      60 70 72 75 85 100 120 140 144 150 170 200 240
 720 x  480  32      60
 720 x  576  32   50 60
 800 x  600  32      60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x  768  32      60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x  864  32      60 70 72 75 85 100 120 140 144 150 170 200
1280 x  720  32      60
1280 x  768  32      60 70 72 75 85 100 120 140 144 150 170
1280 x  800  32      60 70 72 75 85 100 120 140 144 150 170
1280 x  960  32      60 70 72 75 85 100 120 140 144 150 170
1280 x 1024  32      60 70 72 75 85 100 120 140 144 150 170
1360 x  768  32      60 70 72 75 85 100 120 140 144 150 170
1600 x  900  32      60 70 72 75 85 100 120 140 144 150
1600 x 1024  32      60 70 72 75 85 100 120
1600 x 1200  32      60 70 72 75 85 100 120
1680 x 1050  32      60
1920 x 1080  32      60
1920 x 1200  32      60 70 72 75 85 100
1920 x 1440  32      60 70 72 75 85
2048 x 1536  32      60
```

Horizontal Spanning Modes

```
1280 x  480   8      60 70 72 75 85 100 120 140 144 150 170 200 240
1600 x  600   8      60 70 72 75 85 100 120 140 144 150 170 200 240
2048 x  768   8      60 70 72 75 85 100 120 140 144 150 170 200 240
2304 x  864   8      60 70 72 75 85 100 120 140 144 150 170 200
2560 x  720   8      60
2560 x  768   8      60 70 72 75 85 100 120 140 144 150 170
2560 x  800   8      60 70 72 75 85 100 120 140 144 150 170
2560 x  960   8      60 70 72 75 85 100 120 140 144 150 170
2560 x 1024   8      60 70 72 75 85 100 120 140 144 150 170
2720 x  768   8      60 70 72 75 85 100 120 140 144 150 170
3200 x  900   8      60 70 72 75 85 100 120 140 144 150
3200 x 1024   8      60 70 72 75 85 100 120
3200 x 1200   8      60 70 72 75 85 100 120
3360 x 1050   8      60
3840 x 1080   8      60
3840 x 1200   8      60 70 72 75 85 100
3840 x 1440   8      60 70 72 75 85
```

```
4096 x 1536   8      60
-------------------------------------------------------------------
1280 x  480  16      60 70 72 75 85 100 120 140 144 150 170 200 240
1600 x  600  16      60 70 72 75 85 100 120 140 144 150 170 200 240
2048 x  768  16      60 70 72 75 85 100 120 140 144 150 170 200 240
2304 x  864  16      60 70 72 75 85 100 120 140 144 150 170 200
2560 x  720  16      60
2560 x  768  16      60 70 72 75 85 100 120 140 144 150 170
2560 x  800  16      60 70 72 75 85 100 120 140 144 150 170
2560 x  960  16      60 70 72 75 85 100 120 140 144 150 170
2560 x 1024  16      60 70 72 75 85 100 120 140 144 150 170
2720 x  768  16      60 70 72 75 85 100 120 140 144 150 170
3200 x  900  16      60 70 72 75 85 100 120 140 144 150
3200 x 1024  16      60 70 72 75 85 100 120
3200 x 1200  16      60 70 72 75 85 100 120
3360 x 1050  16      60
3840 x 1080  16      60
3840 x 1200  16      60 70 72 75 85 100
3840 x 1440  16      60 70 72 75 85
4096 x 1536  16      60
-------------------------------------------------------------------
1280 x  480  32      60 70 72 75 85 100 120 140 144 150 170 200 240
1600 x  600  32      60 70 72 75 85 100 120 140 144 150 170 200 240
2048 x  768  32      60 70 72 75 85 100 120 140 144 150 170 200 240
2304 x  864  32      60 70 72 75 85 100 120 140 144 150 170 200
2560 x  720  32      60
2560 x  768  32      60 70 72 75 85 100 120 140 144 150 170
2560 x  800  32      60 70 72 75 85 100 120 140 144 150 170
2560 x  960  32      60 70 72 75 85 100 120 140 144 150 170
2560 x 1024  32      60 70 72 75 85 100 120 140 144 150 170
2720 x  768  32      60 70 72 75 85 100 120 140 144 150 170
3200 x  900  32      60 70 72 75 85 100 120 140 144 150
3200 x 1024  32      60 70 72 75 85 100 120
3200 x 1200  32      60 70 72 75 85 100 120
3360 x 1050  32      60
3840 x 1080  32      60
3840 x 1200  32      60 70 72 75 85 100
3840 x 1440  32      60 70 72 75 85
4096 x 1536  32      60
```

Vertical Spanning Modes

```
 640 x  960   8      60 70 72 75 85 100 120 140 144 150 170 200 240
 800 x 1200   8      60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x 1536   8      60 70 72 75 85 100 120 140 144 150 170 200 240
```

```
1152 x 1728   8      60 70 72 75 85 100 120 140 144 150 170 200
1280 x 1440   8      60
1280 x 1536   8      60 70 72 75 85 100 120 140 144 150 170
1280 x 1600   8      60 70 72 75 85 100 120 140 144 150 170
1280 x 1920   8      60 70 72 75 85 100 120 140 144 150 170
1280 x 2048   8      60 70 72 75 85 100 120 140 144 150 170
1360 x 1536   8      60 70 72 75 85 100 120 140 144 150 170
1600 x 1800   8      60 70 72 75 85 100 120 140 144 150
1600 x 2048   8      60 70 72 75 85 100 120
1600 x 2400   8      60 70 72 75 85 100 120
1680 x 2100   8      60
1920 x 2160   8      60
1920 x 2400   8      60 70 72 75 85 100
1920 x 2880   8      60 70 72 75 85
2048 x 3072   8      60
------------------------------------------------------------------
 640 x  960  16      60 70 72 75 85 100 120 140 144 150 170 200 240
 800 x 1200  16      60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x 1536  16      60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x 1728  16      60 70 72 75 85 100 120 140 144 150 170 200
1280 x 1440  16      60
1280 x 1536  16      60 70 72 75 85 100 120 140 144 150 170
1280 x 1600  16      60 70 72 75 85 100 120 140 144 150 170
1280 x 1920  16      60 70 72 75 85 100 120 140 144 150 170
1280 x 2048  16      60 70 72 75 85 100 120 140 144 150 170
1360 x 1536  16      60 70 72 75 85 100 120 140 144 150 170
1600 x 1800  16      60 70 72 75 85 100 120 140 144 150
1600 x 2048  16      60 70 72 75 85 100 120
1600 x 2400  16      60 70 72 75 85 100 120
1680 x 2100  16      60
1920 x 2160  16      60
1920 x 2400  16      60 70 72 75 85 100
1920 x 2880  16      60 70 72 75 85
2048 x 3072  16      60
------------------------------------------------------------------
 640 x  960  32      60 70 72 75 85 100 120 140 144 150 170 200 240
 800 x 1200  32      60 70 72 75 85 100 120 140 144 150 170 200 240
1024 x 1536  32      60 70 72 75 85 100 120 140 144 150 170 200 240
1152 x 1728  32      60 70 72 75 85 100 120 140 144 150 170 200
1280 x 1440  32      60
1280 x 1536  32      60 70 72 75 85 100 120 140 144 150 170
1280 x 1600  32      60 70 72 75 85 100 120 140 144 150 170
1280 x 1920  32      60 70 72 75 85 100 120 140 144 150 170
1280 x 2048  32      60 70 72 75 85 100 120 140 144 150 170
1360 x 1536  32      60 70 72 75 85 100 120 140 144 150 170
1600 x 1800  32      60 70 72 75 85 100 120 140 144 150
```

1600 x 2048	32	60 70 72 75 85 100 120
1600 x 2400	32	60 70 72 75 85 100 120
1680 x 2100	32	60
1920 x 2160	32	60
1920 x 2400	32	60 70 72 75 85 100
1920 x 2880	32	60 70 72 75 85
2048 x 3072	32	60

Modes Supported by TV Encoders

Table A.3 and Table A.4 list the NTSC, PAL, and HDTV TV-Out modes supported by the NVIDIA driver.

Table A.3 Mode Support for S-Video and Composite Out

Resolution	Bit depth	Comments
320x200	8, 16, 32	DirectDraw mode; not selectable as a Windows desktop
320x240	8, 16, 32	DirectDraw mode; not selectable as a Windows desktop
640x400	8, 16, 32	DirectDraw mode; not selectable as a Windows desktop
640x480	8, 16, 32	
720x480	8, 16, 32	Overscans (for video)
720x576	8, 16, 32	Overscans (for video)
800x600	8, 16, 32	
1024x768	8, 16, 32	Conexant 25871 only

Table A.4 Mode Support for Component YPrPb Out and DVI Out

Resolution	Comments
480i (SDTV)	Supported on graphics boards with Conexant 875 or Philips 7108 TV encoders and compatible connectors, and compatible GeForce 6 Series and GeForce 7 Series GPUs.
480p (EDTV)	
720p (HDTV)	
1080i (HDTV)	
576i (PAL)	
576p (PAL)	

The driver supports manual overscan correction for component and DVI outputs. See the *ForceWare Graphics Driver User's Guide* for instructions on how to use the overscan correction features in the control panel.

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